

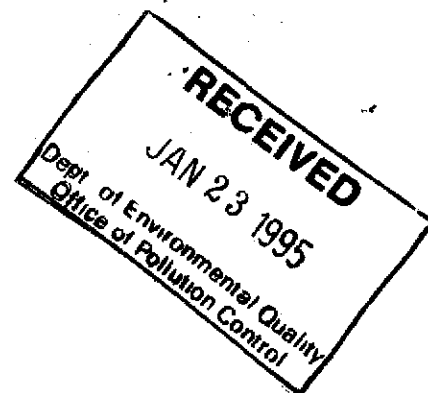


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

NOV 23 1994



4WD-RCRA

Mr. Jerry Banks, Chief
Hazardous Waste Division
Mississippi Department
of Environmental Quality
Post Office Box 10385
Jackson, Mississippi 38289-0385

SUBJ: Comments on Closure Plan, Hazardous Waste
Container Storage Area and Off-Specification
Product Storage Area, South Plant
Cedar Chemical Corporation, MSD 990 714 081
Consent Decree, Civil No.: W92-0008B

Dear Mr. Banks:

The United States Environmental Protection Agency (EPA), Region 4, has reviewed the Closure Plan referenced above, which was submitted on June 15, 1992, by Cedar Chemical Corporation (CCC), in accordance with Section IV of Consent Decree Civil No. W92-0008B.

EPA concurs with the position of the Mississippi Department of Environmental Quality (MSDEQ) that, in order to be approved, the Closure Plan must include methods of demonstrating clean closure, as outlined in comments by MSDEQ, which were transmitted to EPA in a letter dated September 28, 1992. The plan should also be revised to address all other comments enclosed in that letter, and the addendum to comments, provided by EPA. Enclosed is a copy of a letter from EPA to CCC, which states this position.

EPA regrets the delay in reviewing the Closure Plan and any inconvenience caused to MSDEQ and CCC, and will expedite review of the revised Closure Plan, submitted in accordance with the comments and guidance enclosed with EPA's letter to CCC.

If you have any questions, please contact Dr. Judy Sophianopoulos, Project Coordinator, at (404) 347-3555, ext. 6408.

Sincerely yours,



G. Alan Farmer
Chief, RCRA Branch
Waste Management Division

Enclosure

cc: ~~Mr. Jim Tillman, MSDEQ~~
Mr. Keven Posey, MSDEQ



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

NOV 08 1994

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

4WD-RCRA

Mr. Steven T. Boswell, Director
Environmental Affairs
Vicksburg Chemical Company
Post Office Box 821003
Vicksburg, Mississippi 39182

SUBJ: Cedar Chemical Corporation, MSD 990 714 081
Consent Decree, Civil No.: W92-0008B
Closure Plan, Hazardous Waste Container Storage Area
and Off-Specification Product Storage Area, South Plant

Dear Mr. Boswell:

The United States Environmental Protection Agency (EPA), Region 4, has reviewed the Closure Plan referenced above, which was submitted on June 15, 1992, by Cedar Chemical Corporation (CCC), in accordance with Section IV of Consent Decree Civil No. W92-0008B.

EPA concurs with the position of the Mississippi Department of Environmental Quality (MSDEQ) that, in order to be approved, the Closure Plan must include methods of demonstrating clean closure, as outlined in comments by MSDEQ, which were transmitted to EPA in a letter dated September 28, 1992. The plan should also be revised to address all other comments enclosed in that letter, and the addendum to comments, provided by EPA. A copy of the letter and comments from MSDEQ and EPA are enclosed. Also enclosed is a copy of EPA guidance on clean closure, dated May 12, 1989.

Please submit the revised Closure Plan for the Hazardous Waste Container Storage Area and Off-Specification Product Storage Area, South Plant, within forty-five (45) days of receipt of this letter. If CCC should require an extension of this time period, please contact EPA.

EPA regrets the delay in reviewing the Closure Plan of June 1992 and any inconvenience caused to CCC, and will expedite review of the revised Closure Plan, submitted in accordance with this letter and the enclosed comments and guidance.

If you have any questions, please contact Dr. Judy Sophianopoulos, Project Coordinator, at (404) 347-3555, ext. 6408, or write to her at the above address.

Sincerely yours,

for K. Williams
G. Alan Farmer
Chief, RCRA Branch
Waste Management Division

Enclosures (3)

1. Letter from MSDEQ, Dated September 28, 1992, and Comments
2. EPA Comments
3. RCRA Clean Closure Guidance, May 12, 1989

cc: Mr. Jerry Banks, Chief, MSDEQ
~~Mr. Jim Tillman, MSDEQ~~

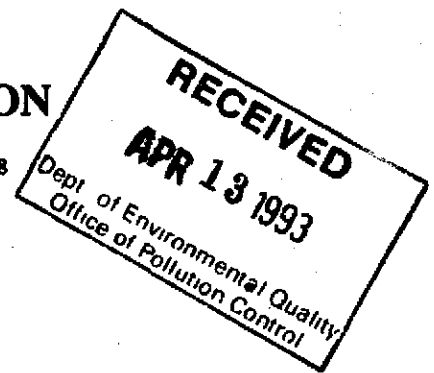
CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

P 861 004 547



April 8, 1993

Taher Diab
Environmental Engineer
TSD Facilities
Hazardous Waste Division
Mississippi Department of
Environmental Quality
Office of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39289-0385

Re: Closure Plan for Hazardous
Container Storage Area
Cedar Chemical Corporation, Vicksburg, MS
EPA ID No. MSD990714081
United States of America v. Cedar Chemical
Corporation, Civil No. W92-0008, In the
United States District Court for the
Southern District of Mississippi

Dear Mr. Diab:

Thank you for your letter of April 2, 1993. I have forwarded your comments regarding the referenced Closure Plan to our consultants, Woodward-Clyde, for their comments. I have also discussed your letter with our attorney.

As you know, the Closure Plan was submitted in accordance with the requirements of Paragraph IV of the Consent Decree entered in the referenced case. It is my understanding that Cedar is required to await receipt of formal written comments from EPA before modifying the plan and, of course, Cedar will be unable to commence closure until EPA has formally approved the Closure Plan or any modified version of the plan. To date, we have still received no notice from EPA regarding the Closure Plan or any of the other documents which have been submitted to EPA under the Consent Decree.

In light of the foregoing, and in light of the possibility that EPA could designate additional hazardous waste

Mr. Taher Diab
April 8, 1993
Page 2

management units requiring closure under Paragraph IV.C of the Consent Decree, it might be sensible for EPA and MSDEQ to temporarily defer consideration of the Closure Plan and instead to review and approve the Preliminary Report so that we can then submit a Facility Investigation Work Plan and implement the investigation as soon as possible. Following the investigation, in connection with the corrective measures to be proposed, we could then focus on the requirements of Paragraph IV of the Consent Decree as they affect closure of the storage area.

By copy of this letter, I am requesting EPA to comment on the above proposal. In any event, we will respond to your comments, and to any additional comments from EPA with regard to the Closure Plan promptly following our receipt of EPA's comments and we will be prepared to commence closure within fifteen days of notification by EPA of its approval of the Closure Plan, together with any agreed revisions, as required by Paragraph IV.H of the Consent Decree.

Again, I appreciate your attention to this matter and look forward to receiving your response to the foregoing suggestion as well as a response from EPA.

Sincerely yours,



Steve Boswell
Director of Environmental Affairs

SB:jw

cc: John Dickinson, Chief
Waste Compliance Section
RCRA and FF Branch
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P 694 580 195

cc: Sam Mabry, Chief
Hazardous Waste Division
Bureau of Pollution Control
Mississippi Department of
Environmental Quality
P. O. Box 10385
Jackson, Mississippi 39209

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P 861 004 548



FILE COPY

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

April 2, 1993

Mr. Steve Boswell
Vicksburg Chemical Company
P.O. Box 821003
Rifle Range Road
Vicksburg, MS 39182

Re: Comments on Closure Plan for Hazardous
Container Storage Area and Off-Specification
Product Storage Area
Cedar Chemical Corporation, Vicksburg, MS
EPA I.D. No. MSD 990 714 081

Dear Mr. Boswell:

Enclosed are comments on the latest Closure Plan submitted in June of 1992. We have incorporated EPA's comments on a previously submitted plan by Cedar Chemical Corporation.

Please submit a revised plan incorporating these comments to our office by June 11, 1993.

If you have any questions, please call me at 601-961-5389.

Sincerely,



Taher Diab
TSD Facilities
Hazardous Waste Division

TD:gd
Enclosure

cc: Mr. G. Alan Farmer, RCRA Branch, EPA

CEDAR CHEMICAL CORPORATION

Comments to Closure Plan

April 1, 1993

1. Page 4 and Appendix C (page 8) - The closure standard will be based on health based soil concentrations which do not result in a cumulative carcinogenic risk greater than 1×10^{-6} using the most current Carcinogen Slope Factors (which are not necessarily the same as those from the RFI Guidance or the proposed Subpart S Rule), and standard exposure assumptions which are provided in the RFI Guidance. These standard exposure assumptions will also be used when calculating the hazard index for systemic toxicants.

Health Based Closure Standards for Soils:

<u>Constituent</u>	<u>Concentration</u>	<u>Reference</u>
Dinoseb	80 mg/kg	Based on Chronic Oral RfD of 1×10^{-3} mg/kg/day (IRIS)
Arsenic	24 mg/kg	Based on Chronic Oral RfD of 3×10^{-4} mg/kg/day (IRIS)
Toxaphene	0.64 mg/kg	Calculated using 1×10^{-6} risk factor, 70 kg adult, intake of 1×10^{-4} kg/day and a slope factor of 1.1 (mg/kg/day) ⁻¹) (IRIS)
Atrazine	400 mg/kg	Based on Chronic Oral RfD of 5×10^{-3} mg/kg/day (IRIS)
Toluene	16,000 mg/kg	Based on Chronic Oral RfD of 2×10^{-1} mg/kg/day, 16 kg child and 2×10^{-4} kg/day (IRIS)

To achieve clean closure, hazardous waste and waste residue must be removed or decontaminated. To make this demonstration, concentrations of hazardous constituents remaining in the storage area must be below health based levels, since these levels are used to indicate whether or not hazardous waste is still present in the unit.

2. Page 4 "Closure Performance Standard" - The analysis of hydroblast water cannot be substituted for direct sampling and analysis of the concrete to be left in place. However, any solids derived from the hydroblasting process must meet the health based closure standards for soils before disposal into a commercial solid waste disposal facility. To adequately determine clean closure of the concrete to be left in place a more direct method of testing the concrete surface should be used. Therefore the following recommendation is made to wipe-test the surface of the concrete using the random sampling guidelines of Chapter 9 of SW 846 "Test Methods for Evaluating Solid Waste", Third Edition. The basic procedure is to wipe the specified area with a cotton gauze - one to analyze for the organic constituents and one to analyze for the inorganic constituents. Each gauze wipe would be saturated with the appropriate preservative. Blanks would need to be run also to verify the results. The closure standards for this process would need to be based on detection limits since oral exposure routes are highly improbable in this case. If this recommendation is not followed then Cedar Chemical must select some other adequate method for the direct determination that clean closure has been established. This must be done before certification of closure will be accepted.

Primary Drinking Water Standards to be met by Hydroblast Water:

<u>Constituent</u>	<u>Concentration</u>	<u>Reference</u>
Dinoseb	0.007 mg/l	Proposed MCL FR, July 25, 1990
Arsenic	0.05 mg/l	MCL
Toxaphene	0.003 mg/l	MCL FR, Jan. 30, 1991
Atrazine	0.003 mg/l	MCL FR, Jan 30, 1991
Toluene	1.0 mg/l	MCL FR, Jan 30, 1991

These standards must be met before the hydroblast water can be wasted to the environment.

3. Page 16 "Pad and Equipment Decontamination" - Toxaphene was omitted from the list of constituents to be analyzed for in the third paragraph. This sentence shall now read "A representative composite containing bits of plastic sheeting, dislodged concrete, and any other solids generated during the decontamination operations will be sent to a

offsite laboratory to test for Toxaphene, Dinoseb, Arsenic, Atrazine, and Toluene."

4. Page 18 "Soil Sampling" - It is stated "In the event that clean closure criteria are not met, soil removal and additional sampling would be required." It must be understood that for clean closure to be certified and verified the health based closure standards for soils and the concrete must be met. If at a point during closure work Cedar Chemical determines that physical excavation is no longer feasible to meet clean closure standards then at that time the MDEQ must be notified and a post-closure plan be submitted as required by MHWMR Part 265 Subpart G.
5. Page 17 "Soil Sampling" - Since sample points have been selected to be collected from areas where the concrete pad is cracked, consideration must be given as to whether or not sample points should also be located around the perimeter of the unit where there may have been contaminated runoff from the pad, or where curbing may have been breached. Therefore it is required that sample points be located adjacent to each evident crack or fissure of the drainage curb of the concrete pad.
6. Page 18 "Soil Sampling" - Although the closure plan states that the "mobility of pesticides in soil underneath the concrete will be limited, "specifications from some of the formulations indicate that some of the products stored in these areas were infinitely soluble in water, and as such have the potential to be more mobile than some of the pesticides in their pure form. Based on this observation, it appears that a six-inch sampling depth would be insufficient, especially since the units were in operation for 10 years. Therefore the six-inch proposed sampling depth will be the initial depth that is sampled.
7. Page 21 "Analytical Methods and Parameters" - It is stated that Cedar will use its onsite laboratory when possible for screening, but no mention is made anywhere else with regard to the purpose of such screening. Such screening does not appear to be necessary for the purpose of demonstrating clean closure.
8. Page 23 "Contingent Closure Plan" - The proposed "flexible cleanup" alternatives based on a site-specific risk assessment and installation of a RCRA cap is not allowed under RCRA regulations. All hazardous constituents in and around the unit must either be removed to achieve the cleanup levels discussed above, or the unit must be redefined as a landfill, undergo post-closure, and obtain a post-closure permit. In the is case, installation of a groundwater monitoring system for the unit would also be required.

9. What is the intended future use of the storage areas? If the existing sumps are going to be active after closure, every effort should be made to ensure that any holes in the concrete are properly sealed so that future contaminant migration is minimized. This situation can be avoided if angle borings are taken to collect samples from under the sumps, rather than drilling through the sumps.
10. It is required that Cedar Chemical give ten (10) days notice to the MDEQ prior to commencement of the work activities so that split samples may be taken to help verify the results.



FILE COPY

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

September 28, 1992

CERTIFIED MAIL NO. P 046 601 345

Mr. G. Allan Farmer, Chief
RCRA Branch
Waste Management Division
U. S. E.P.A., Region IV
345 Courtland St., N.E.
Atlanta, GA 30365

Re: Comments on Closure Plan for the Hazardous
Container Storage Area and Off-Specification
Product Storage Area
Cedar Chemical Corporation, Vicksburg, Mississippi
EPA I. D. No. MSD 990 714 081

Dear Mr. Farmer:

Enclosed is our list of comments on the latest Closure Plan submitted in June of this year. In this list, we have incorporated EPA's comments dated February 7, 1992, on a previously submitted plan by Cedar Chemical Corporation.

If you have any questions, please feel free to give Mr. Taher Diab of my Staff a call at 601-961-5171.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jerry Banks".

Jerry Banks, Chief
RCRA Section
Hazardous Waste Division

JB:gd

Enclosure

CEDAR CHEMICAL CORPORATION

Comments to Closure Plan
dated June, 1992

1. Page 4 and Appendix C (page 8) - The closure standard will be based on health based soil concentrations which do not result in a cumulative carcinogenic risk greater than 1×10^{-6} using the most current Carcinogen Slope Factors (which are not necessarily the same as those from the RFI Guidance or the proposed Subpart S Rule), and standard exposure assumptions which are provided in the RFI Guidance. These standard exposure assumptions will also be used when calculating the hazard index for systemic toxicants.

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10. It is required that Cedar Chemical give ten (10) days notice to the MDEQ prior to commencement of the work activities so that split samples may be taken to help verify the results.

1-sher

CEDAR CHEMICAL CORPORATION

rec'd
6/15/92

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P.O. BOX 821003
VICKSBURG, MS 39182
(601) 636-1231

VIA FEDERAL EXPRESS

Mr. Sam Mabry, Chief
Hazardous Waste Division
Bureau of Pollution Control
MS Dept. of Env. Quality
P.O. Box 10385
Jackson, MS 39209

June 9, 1992

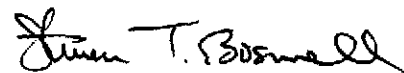
Re: Cedar Chemical Corporation, MSD 990714081
Consent Decree and RCRA Facility Investigation
Closure Plan, Hazardous Waste Container Management Area and
Returned Product Storage Area

Dear Mr. Mabry:

Please find enclosed a copy of the referenced Plan as required by Section IV of the Decree (Civil No. W92-0008(B)). The proposed closure performance standards are based on assumptions that the Cedar facility will remain industrial in character and that exposure pathways to the maximally exposed individuals (Cedar employees) do not provide sufficient exposure to result in more than a one-in-ten-thousand non-cumulative risk.

Please contact Cedar Chemical with any comments or objections there may be.

Sincerely,



Steven T. Boswell
Dir. of Env. Affairs

STB: pc

xc: Mr. Miles
Mr. Madsen
Mr. Malone, Apperson, Crump
Mr. Karkkainen, Woodward-Clyde

File

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P.O. BOX 3
VICKSBURG, MS 39181
(601) 636-1231

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P 413 276 254

Mr. John Taylor
Environmental Engineer
MS Dept. of Env. Quality
2380 U.S. Highway 80 West
Jackson, MS 39204

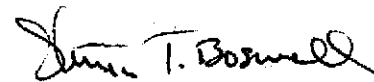
February 10, 1992

Re: Cedar Chemical Corporation
Hazardous Waste Drum Storage Area
Closure Plan

Dear Mr. Taylor:

As I mentioned in our discussions, Friday, February 7, 1992, Cedar Chemical, by this letter, withdraws its proposed closure plan for the Hazardous Waste Drum Storage Area. As the Consent Decree between Cedar and USEPA will become effective shortly, Cedar believes that it is appropriate to proceed under the auspices of that Instrument. Cedar will resubmit the plan as required by the Decree.

Sincerely,



Steven T. Boswell
Dir. of Env Affairs

STB: pc

xc: Mr. Miles
Mr. Madsen
Mr. Malone
Mr. Karkkainen

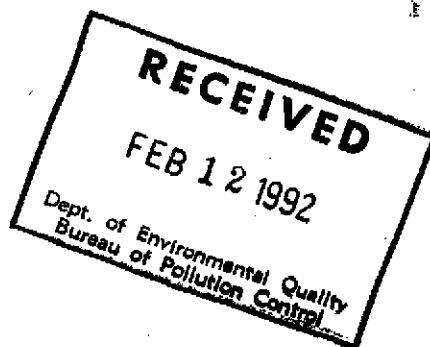
Rec 2/11/92



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365



FEB - 7 1992

4WD-RCRA/FF

Mr. Steven T. Boswell
Director of Environmental Affairs
Cedar Chemical Corporation
Post Office Box 3
Vicksburg, Mississippi 39181

Re: Closure Plan for the Hazardous Waste Container Storage Area
and Off-Specification Product Storage Area
Cedar Chemical Corporation, Vicksburg, Mississippi
EPA I.D. Number MSD 990 714 081

Dear Mr. Boswell:

EPA has received both the revised closure plan referenced above and the revised "Methodology for Calculation of Cleanup Criteria." These documents have been reviewed by EPA for the purpose of providing technical assistance to the Mississippi Department of Environmental Quality (MDEQ). MDEQ is authorized to implement the base RCRA program in lieu of EPA, and therefore has full authority to make all final decisions regarding issues such as permitting and closure of RCRA-regulated units.

Comments on general aspects of the closure plan, health-based cleanup levels, and application of those cleanup levels have been sent to MDEQ. EPA sees no reason to deviate from the closure standard based on health-based soil concentrations which do not result in a cumulative carcinogenic risk greater than 1×10^{-6} using the standard exposure assumptions.

If you have any further questions regarding the above information, please direct them to Mr. John Taylor of the Mississippi Department of Environmental Quality. If necessary, he will contact EPA for further technical assistance.

Sincerely yours,

G. Alan Farmer
Chief, RCRA Branch
Waste Management Division

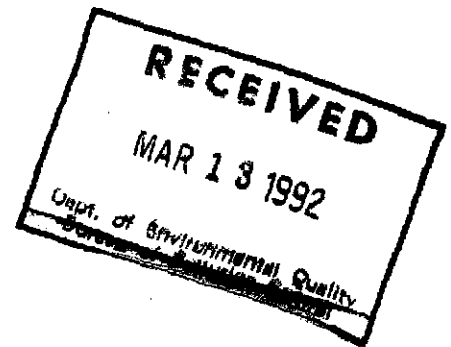
cc: Mr. Steve Spengler, MDEQ
Mr. John Taylor, MDEQ



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365



MAR 10 1992

4WD-RCRA/FF

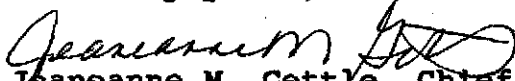
Mr. Wm. Stephen Spengler, P.E.
Chief, RCRA Branch
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, Mississippi 39289-0385

Re: Cedar Chemical RFA
EPA ID# MSD 990 714 081

Dear Mr. Spengler:

Enclosed please find a copy of the draft RCRA Facility Assessment of Cedar Chemical Corporation, Vicksburg, Mississippi, currently under review by the U.S. Environmental Protection Agency. Please check this document for consistency with your knowledge of the facility. Your comments or questions are welcome and should be directed to Dann Spariosu at (404) 347-7603.

Sincerely yours,


Jeaneanne M. Gettle, Chief
West Unit
RCRA Compliance Section

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

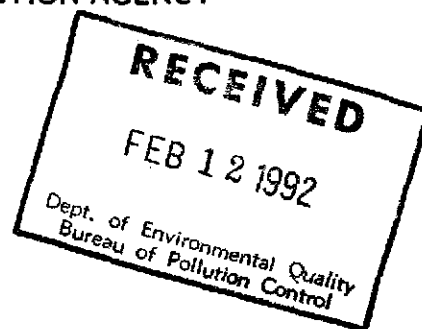
REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

FEB - 7 1992

4WD-RCRA/FF

Mr. Steve Spengler, Chief
RCRA Branch
Mississippi Department of Environmental Quality
Post Office Box 10385
Jackson, Mississippi 39209



Re: Comments on Closure Plan for the Hazardous Waste Container
Storage Area and Off-Specification Product Storage Area
Cedar Chemical Corporation, Vicksburg, Mississippi
EPA I.D. Number MSD 990 714 081

Dear Mr. Spengler:

In response to a request from MSDEQ, EPA provided comments dated August 19, 1991, to MSDEQ on the "Hazardous Waste Container Storage Area, Off-Specification Product Storage Area, South Plant" closure plan for Cedar Chemical Corporation. These comments included comments generated by the RCRA Permitting Section and the Environmental Services Division.

Woodward-Clyde Consultants (WCC), on behalf of Cedar, submitted a revised closure plan with response to comments to MSDEQ dated December 3, 1991. In this response, WCC, on behalf of Cedar Chemical Company, disputed EPA's comments on use of 1×10^{-6} as a health-based cleanup goal and analysis of hydroblast water as an indication that the cleanup goals have been achieved. In addition, WCC indicated that "Cedar would prepare a flexible cleanup based on actual exposure and acutal intended land use based on results of data obtained by sampling and analysis . . ." if clean closure could not be acheived in accordance with the approved closure plan.

On December 18, 1991, MSDEQ contacted EPA by phone, requesting technical assistance with regard to use and calculation of health-based cleanup values for the above mentioned storage areas, because a meeting with Cedar was to be held later that day. MSDEQ was informed that the facility should be required to clean up the storage areas such that the cumulative carcinogenic risk posed by hazardous consitiuents in the soil, did not exceed 1×10^{-6} , based on standard exposure assumptions and methodology specified in the RFI Guidance. Use of this risk number was supported by the location of residential housing adjacent to the site.

Since that time, EPA has received a copy of a revised "Methodology for Calculation of Cleanup Criteria" containing WCC and Cedar's argument for the use of 1×10^{-4} cancer risk as the cleanup standard for each constituent at the storage area. This document was sent

to the EPA by both Cedar and MSDEQ, requesting further discussion of Cedar's proposal.

WCC is apparently attempting to apply CERCLA standards for remedial decisionmaking and risk assessment to clean closure of container storage units which are regulated under RCRA. Since clean closure requires removal or decontamination of all hazardous waste and waste residues, use of conservative risk-based concentration limits is justified in order to demonstrate that all hazardous waste has been removed from the storage units.

Based on a brief review of the revised closure plan and WCC's response to EPA comments, the following additional comments are offered.

1. Page 4 - Reference to and use of Superfund guidance and policy documents for the purpose of demonstrating clean closure under RCRA is not acceptable. As stated previously, the closure standard must be based on health-based soil concentrations which do not result in a cumulative carcinogenic risk greater than 1×10^{-6} using the most current Carcinogen Slope Factors (which are not necessarily the same as those from the RFI Guidance or the proposed Subpart S Rule), and standard exposure assumptions which are provided in the RFI Guidance. These standard exposure assumptions must also be used when calculating the hazard index for systemic toxicants.

To achieve clean closure, hazardous waste and waste residue must be removed or decontaminated. To make this demonstration, concentrations of hazardous constituents remaining in the storage area must be below health-based levels, since these levels are used to indicate whether or not hazardous waste is still present in the unit. EPA sees no reason to deviate from this policy.

2. Page 5 - The closure plan makes reference to "instances where analysis of hydroblast water is indicative of residual concentrations." EPA does not agree that analysis of hydroblast water could be substituted for direct sampling and analysis of the concrete to be left in place. The facility should consider wipe-testing the concrete to determine whether the closure standard has been met, rather than analysis of the total constituent concentrations or analysis of the hydroblast water. Cleanup standards for use with this type of analysis should be proposed by the facility.
3. Page 6 - Toxaphene was omitted from the list of constituents to be analyzed for in the sample "containing bits of plastic sheeting, dislodged concrete, and any other solids generated during the decontamination operations. . .".
4. Page 8 - The plan specifies that holes will be made in the

concrete to allow for soil sampling beneath the concrete pads. The closure plan states that "in the event that clean closure criteria are not met, soil removal and additional sampling would be required". Contaminated Soil Removal is addressed on Page 7, but there is no indication of the extent of concrete or soil excavation to be performed.

5. Page 8 - OSWER 9476-00-8.C (Draft Surface Impoundment Clean Closure Guidance Document) is referenced to support the number of sampling points chosen. References should not be made to documents which have not been finalized or officially released outside of the agency. Furthermore, the unit to be closed is a container storage area, not a surface impoundment.
6. Page 8 - Since sample points have been selected to be collected from areas where the concrete pad is cracked, consideration should be given as to whether or not sample points should also be located around the perimeter of the unit where there may have been contaminated runoff of the pad, or curbing may have been breached.
7. Page 8 - Although the closure plan states that the "mobility of pesticides in soil underneath the concrete will be limited," specifications from some of the formulations indicate that some of the products stored in these areas were infinitely soluble in water, and as such have the potential to be more mobile than some of the pesticides in their pure form. Based on this observation, it appears that a six-inch sampling depth would be insufficient, especially since the units were in operation for 10 years.
8. Page 9 - The following statement is made: "The Data Collection Plan and Data Management Plan are attached as Appendix D and E." It is not clear that Cedar intends to follow these plans, especially since they are stamped "Draft", and are not referenced in any other manner. Outside of these plans, no information is provided with regard to quality assurance sampling, such as collection and analysis of rinsate blanks, trip blanks, etc. Furthermore, soil sampling proposed in the closure plan (six inch samples) does not agree with soil sampling procedures in the Data Collection Plan (12 inch samples).
9. Page 11 - It is stated that Cedar will use its onsite laboratory when possible for screening, but no mention is made anywhere else with regard to the purpose of such screening. Such screening does not appear to be necessary for the purpose of demonstrating clean closure.
10. Page 13 - The proposed "flexible cleanup" alternative, based on a site-specific risk assessment and installation of a RCRA cap is not allowed under RCRA regulations. All hazardous

constituents in and around the unit must either be removed to achieve the cleanup levels discussed above, or the unit must be redefined as a landfill, undergo post-closure, and obtain a post-closure permit. In this case, installation of a groundwater monitoring system for the unit would also be required.

11. What is the intended future use of the storage areas? If the existing sumps are going to be active after closure, every effort should be made to ensure that any holes in the concrete are properly sealed so that future contaminant migration is minimized. This situation can be avoided if angle borings are taken to collect samples from under the sumps, rather than drilling through the sumps.
12. It is strongly recommended that the plan include provisions for notification of the State prior to sampling activities so that MDEQ can collect and analyze split samples from the regulated units during closure.

In the comments presented above, and in previous comments, EPA has made recommendations regarding general aspects of the closure plan, health-based cleanup levels, and application of those cleanup levels. We strongly encourage the State to incorporate, as appropriate, EPA comments into a single response from the State to avoid any confusion the facility may have as to which agency has regulatory authority. This will also help prevent facilities from directly contacting EPA to resolve issues and discuss recommendations EPA provides to the State.

EPA sees no reason to allow cleanup standards less stringent than those originally proposed. Assuming that the State is in agreement with this, the facility has no grounds to argue the above determinations, and must comply with standards issued by the regulatory agency. If the closure plan is not revised to reflect appropriate clean-up standards, then it is recommended that Mississippi place the plan on public notice and approve it with modifications to ensure that a protective closure is achieved.

If you have any questions regarding this matter, please contact Elizabeth Ketcham of the RCRA Permitting Section at (404)347-3433.

Sincerely yours,



G. Alan Farmer
Chief, RCRA Branch
Waste Management Division

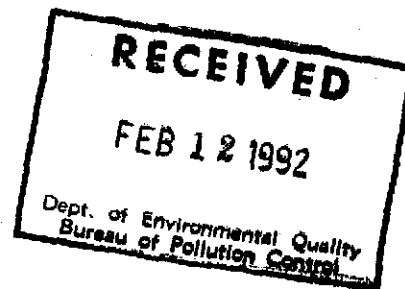


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

FEB - 7 1992
4WD-RCRA/FF



Mr. Steven T. Boswell
Director of Environmental Affairs
Cedar Chemical Corporation
Post Office Box 3
Vicksburg, Mississippi 39181

Re: Closure Plan for the Hazardous Waste Container Storage Area
and Off-Specification Product Storage Area
Cedar Chemical Corporation, Vicksburg, Mississippi
EPA I.D. Number MSD 990 714 081

Dear Mr. Boswell:

EPA has received both the revised closure plan referenced above and the revised "Methodology for Calculation of Cleanup Criteria." These documents have been reviewed by EPA for the purpose of providing technical assistance to the Mississippi Department of Environmental Quality (MDEQ). MDEQ is authorized to implement the base RCRA program in lieu of EPA, and therefore has full authority to make all final decisions regarding issues such as permitting and closure of RCRA-regulated units.

Comments on general aspects of the closure plan, health-based cleanup levels, and application of those cleanup levels have been sent to MDEQ. EPA sees no reason to deviate from the closure standard based on health-based soil concentrations which do not result in a cumulative carcinogenic risk greater than 1×10^{-6} using the standard exposure assumptions.

If you have any further questions regarding the above information, please direct them to Mr. John Taylor of the Mississippi Department of Environmental Quality. If necessary, he will contact EPA for further technical assistance.

Sincerely yours,

G. Alan Farmer
Chief, RCRA Branch
Waste Management Division

cc: Mr. Steve Spengler, MDEQ
Mr. John Taylor, MDEQ

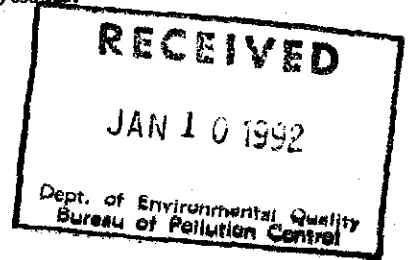
CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P.O. BOX 3
VICKSBURG, MS 39181
(601) 636-1231

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P 413 276 247

Mr. John Taylor
Environmental Engineer
Mississippi Department of Environmental Quality
2380 Highway 80 West
Jackson, MS 39204



January 9, 1992

Re: Cedar Chemical Corporation, MSD990714081
Hazardous Waste Container Storage Area
Off-Specification Product Storage Area
Closure Plan

Dear Mr. Taylor:

Please find accompanying this letter a revised version of the "Methodolgy for Calculation of Cleanup Criteria" that should replace the section in the original Plan submitted to your office. A copy of this letter and attachment is being sent to Ms. Elizabeth Ketchum of USEPA, Region IV.

If there are any questions concerning this matter, please contact me.

Sincerely,

A handwritten signature in dark ink, appearing to read "Steven T. Boswell".

Steven T. Boswell
Director of Env. Affairs

STB: pc

xc: Mr. Miles
Mr. Madsen
Mr. Karkkainen, Woodward-Clyde

2822 O'Neal Lane
Post Office Box 66317
Baton Rouge, Louisiana 70896
(504) 751-1873
FAX (504) 753-3616

Woodward-Clyde Consultants

January 7, 1992

Mr. Steve Boswell
Cedar Chemical Corporation
Post Office Box 821003
Rifle Range Road
Vicksburg, Mississippi 39182-1003

Dear Steve:

Attached is a revised version of the "Methodology For Calculation of Cleanup Criteria". It differs from the original version as follows:

- Dr. Brad Droy corrected the calculation error made by June Sutherlin, and
- the arguments we discussed during our 12/26/91 meeting emphasizing 1.0×10^{-4} cancer risk are incorporated.

Please send a copy to any of the agencies that have the Drum Storage Closure Plan.

Very truly yours,



Dick Karkkainen
RDK/lb

cc: Allen Malone
Randal Tomblin
Fred Ahlers
David Madsen

Consulting Engineers, Geologists
and Environmental Scientists

Offices in Other Principal Cities



METHODOLOGY FOR CALCULATION OF CLEANUP CRITERIA

The development of site-specific health-based remedial goals is based on the health risk assessment process in accordance with EPA Risk Assessment Guidelines for Superfund (RAGS). Remedial goals for the identified constituents of potential concern are obtained through backcalculation of health risk estimation calculations.

CALCULATIONS OF CANCER RISK

The calculation of cancer risk is herein summarized. In the calculation of potential carcinogenic health risk at a site, the concentration of constituent in the medium (Column A) is multiplied by a receptor specific intake factor (Column B) to obtain the lifetime average daily intake of chemical (Column C) for the receptor. To estimate cancer risk (Column E) the daily intake (Column C) is multiplied by the slope factor (Column D).

Chemical Concentration (mg/kg)	Intake Factor (kg/kg/day)	Lifetime Average Daily Intake (mg/kg/day)	Slope Factor (mg/kg/day) ⁻¹	Cancer Risk
A	B	C	D	E

$$\text{Daily Intake} = (\text{Chemical Concentration}) (\text{Intake Factor})$$

$$C = (A) (B)$$

$$\text{Cancer Risk} = (\text{Slope Factor}) (\text{Lifetime Average Daily Intake})$$

$$E = (D) (C)$$

CALCULATION OF NONCARCINOGENIC HEALTH EFFECTS (HAZARD QUOTIENT)

The calculation of the potential for noncarcinogenic health effects, called the hazard quotient, is summarized as follows. The calculation is similar to the calculation for carcinogens. The concentration of the constituent in the medium (Column A) is multiplied by a receptor specific intake factor (Column B) to obtain the average daily intake of chemical (Column C) for the receptor. To estimate the hazard quotient (Column E), the daily intake (Column C) is multiplied by the reciprocal of the reference dose (Column D).

Chemical Concentration (mg/kg)	Intake Factor (kg/kg/day)	Average Daily Intake (mg/kg/day)	RfD (mg/kg/day)	Hazard Quotient
A	B	C	D	E

$$\text{Average Daily Intake} = (\text{Intake Factor}) (\text{Chemical Concentration})$$

$$C = (B) (A)$$

$$\text{Hazard Quotient} = \frac{\text{Daily Intake}}{1} \frac{1}{\text{RfD}}$$

$$E = C \frac{1}{D}$$

CLEANUP CRITERIA CALCULATIONS FOR CARCINOGENS

To derive site-specific concentrations in a medium that are protective of human health, the calculations presented above are reversed. For carcinogens, an acceptable cancer risk level is designated (Column E) and divided by the slope factor (Column D) to yield the acceptable daily chemical intake (Column C). The acceptable lifetime average daily intake (Column C) is then divided by the intake factor (Column B) to obtain an

acceptable concentration of chemical in the medium; i.e., a chemical-specific cleanup goal (Column A).

Acceptable Cancer Risk	Slope Factor (mg/kg/day) ⁻¹	Lifetime Average Daily Intake (mg/kg/day)	Intake Factor (kg/kg/day)	Chemical Concentration mg/kg
E	D	C	B	A

$$\text{Acceptable Lifetime Average Daily Intake} = \frac{\text{Acceptable Cancer Risk}}{\text{Slope Factor}}$$

$$C = \frac{E}{D}$$

$$\text{Acceptable Chemical Concentrations} = \frac{\text{Acceptable Lifetime Average Daily Intake}}{\text{Intake Factor}}$$

$$A = \frac{C}{B}$$

CLEANUP CRITERIA CALCULATIONS FOR NONCARCINOGENS

For noncarcinogenic constituents, the hazard quotient (Column E) is assigned an acceptable value which is multiplied by the reference dose (Column D) to yield the acceptable average daily chemical intake (Column C). The acceptable daily chemical intake is divided by the intake factor (Column B) to obtain the acceptable concentration of chemical in the medium; i.e., a chemical-specific cleanup goal (Column A).

Acceptable Hazard Quotient	RfD (mg/kg/day)	Average Daily Intake (mg/kg/day)	Intake Factor (kg/kg/day)	Acceptable Chemical Concentration mg/kg
E	D	C	B	A

Acceptable Average Daily Chemical Intake = (Acceptable Hazard Quotient) (RfD)

$$C = (E) (D)$$

Acceptable Chemical Concentration = $\frac{\text{Acceptable Average Daily Chemical Intake}}{\text{Intake Factor}}$

$$A = \frac{C}{B}$$

Cleanup goals are usually governed by potential carcinogens found onsite although cleanup goals for noncarcinogenic compounds may also be evaluated. Where toxicity values for the evaluation of both carcinogenic and noncarcinogenic health effects are available, cleanup criteria were calculated for both and cleanup criteria will be established based on the more conservative chemical concentration calculated.

TARGET CANCER RISKS

An acceptable level of potential cancer risk is selected after evaluation of site variables including the types and activities of receptors on or near the site, types of potential exposures, the inherent toxicity of chemicals found on or near the site, and the EPA guidelines governing remedial goals and risk management decisions (OSWER Directive 9355.0-30).

A noncumulative potential cancer risk of 1×10^{-4} has been selected for the site. This level of potential risk has been selected based on the following:

- The areas are currently abandoned and access is restricted.
- Future site use will be industrial/commercial.
- Topographic analysis indicates that potential exposure to residential receptors is not likely to occur.
- Potential future exposures will be transient and related primarily to the duration and frequency with which workers are on-site.
- The potential carcinogens on the site are known to induce unrelated target organ-specific effects, therefore potential carcinogenicity should not be treated as additive.
- EPA guidelines state that for the calculation of cleanup goals for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of 10^{-4} (EPA OSWER Directive 9355.0-30).

TARGET HAZARD QUOTIENT

A target potential hazard quotient of 1 has been selected for the development of soil cleanup criteria at the former pesticide facility. A hazard quotient less than 1 represents an exposure level that is without adverse health effects in exposed populations (EPA RAGS).

SPECIFIC CALCULATIONS FOR CEDAR - CARCINOGENS

Based on the assumptions noted above, an intake factor is calculated:

$$\begin{aligned}
 \text{Intake Factor} &= \frac{(IR)(EF)(ED)(ME)(FI)(CF)(SS)}{(BW)(AT)} \\
 &= \frac{(50 \text{ mg/day})(250 \text{ days/yr})(25 \text{ years})(1 \times 10^{-6} \text{ kg/mg})}{(70 \text{ kg})(365 \text{ days/yr} \times 70 \text{ years})} \\
 &= 1.74 \times 10^{-7} \text{ kg/kg/day}
 \end{aligned}$$

where: IR = Ingestion rate (mg soil/day)
50 mg/day (OSWER Directive 9285.6-0.3, "Standard Default Exposure Factors", 3/25/91)

FI = Fraction ingested from contaminated source (unitless)
Pathway-specific value (should consider contaminant location and population activity patterns); assume FI = 1

EF = Exposure frequency (days/year)
250 workdays/year at Cedar

ED = Exposure duration (years)
25 years for Cedar workers

CF = Conversion factor (10^{-6} kg/mg)

BW = Body weight (kg)
70 kg (adult, average; EPA 1989d)

AT = Averaging time (period over which exposure is averaged, days)
 Pathway-specific period of exposure for noncarcinogenic effects
 (i.e., ED x 365 days/year), and 70-year lifetime for carcinogenic
 effects (i.e., 70 years x 365 days/year)

ME = Matrix effect; use 1

SS = Site-specific factor; assume 1

The following table is then prepared from calculations of noncumulative carcinogenic exposure:

Acceptable Concentration in Soil (ppm or mg/kg)	Intake Factor (kg/kg/day)	Acceptable Lifetime Average Daily Chemical Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day ⁻¹)	Acceptable Risk Goal
Atrazine 2,586 ppm	1.74E-07	4.5E-04	2.2E-01	10 ⁻⁴
Toxaphene 523 ppm	1.74E-07	9.1E-05	1.1E+00	10 ⁻⁴
Arsenic 328 ppm	1.74E-07	5.7E-05	1.75E+00	10 ⁻⁴

SPECIFIC CALCULATIONS FOR CEDAR - NONCARCINOGENS

The intake factor is similar to the carcinogen calculation except that AT = (365 days/yr x 25 years).

$$\begin{aligned}
 \text{Intake Factor} &= \frac{(IR)(EF)(ED)(ME)(FI)(CF)(SS)}{(BW)(AT)} \\
 &= \frac{(50 \text{ mg/day})(250 \text{ days/yr})(25 \text{ years})(1 \times 10^{-6} \text{ kg/mg})}{(70 \text{ kg})(365 \text{ days/yr} \times 25 \text{ years})} \\
 &= 4.89 \times 10^{-7}
 \end{aligned}$$

The following table is then prepared from calculations of noncumulative noncarcinogenic exposure:

Acceptable Concentration in Soil (ppm or mg/kg)		Intake Factor (kg/kg/day)	Acceptable Average Daily Chemical Intake (mg/kg/day)	Oral RfD (mg/kg/day)	Acceptable HQ Goal
Atrazine	10,225 ppm	4.89×10^{-7}	5E-03	5E-03	1
Dinoseb	2,045 ppm	4.89×10^{-7}	1E-03	1E-03	1
Arsenic	2,045 ppm	4.89×10^{-7}	1E-03	1E-03	1
Toluene	613,497 ppm	4.89×10^{-7}	3E-01	3E-01	1

CONCLUSIONS

The calculated acceptable soil concentrations are lower for carcinogens than for noncarcinogens for atrazine and arsenic. Therefore, the carcinogen-based soil concentration for these chemicals will be used in order to be conservative. Based on the

carcinogen and noncarcinogen calculations for the five chemicals of concern, the following soil concentrations are initially proposed for remediation:

Chemical	Soil Remediation Concentration
Atrazine	2,586 ppm
Arsenic	328 ppm
Dinoseb	2,045 ppm
Toluene	613,497 ppm
Toxaphene	523 ppm

However, in order to be more conservative, we propose to use EPA-based cleanup levels for potential contaminants for which guidance soil concentrations have been published. Therefore, for site closure, we propose the following cleanup soil concentrations:

Chemical	Soil Remediation Concentration
Atrazine	2,586 ppm
Arsenic	80 ppm ¹
Dinoseb	80 ppm ²
Toluene	613,497 ppm
Toxaphene	60 ppm ³

¹ Federal Register (July 27, 1990), Appendix A.

² RCRA Facility Investigation Guidance Document, Volume 1, Table 8-7.

³ Federal Register (July 27, 1990), Appendix C.

However, toluene is dropped from the final remediation list due to the low relative toxicity concern compared to the other chemicals of concern at the site and the likelihood that toluene residues should be present in very minor quantities in the medium of concern (soil).

The potential cancer risks and hazard quotients associated with these cleanup goals were recalculated and are presented as follows:

Chemical	Soil Remediation Concentration	Cancer Risk	Hazard Quotient
Atrazine	2,586 ppm	1.0×10^{-4}	0.25
Arsenic	80 ppm	2.4×10^{-5}	0.04
Dinoseb	80 ppm	*NA	0.04
Toxaphene	60 ppm	2.0×10^{-6}	*NA

* Not Applicable.

For noncarcinogens, the potential hazard should be viewed as additive since dinoseb, atrazine and possibly arsenic are known to induce some form of reproductive toxicity. The cumulative hazard index (sum of the hazard quotients) is less than 1.0 (0.33), which indicates that cleanup goals should be protective of noncarcinogenic toxicity in humans assuming additivity of effects. The hazard index (0.33) is well below the maximum hazard index (1.0) that would indicate potential cumulative toxicity. Therefore, it is not believed that cleanup goals will be governed by noncarcinogenic toxicity at this site.

In regard to carcinogens, potential carcinogenicity at the site should not be treated as additive since the potential carcinogens are known to induce unrelated target organ-specific effects. For instance, arsenic targets the skin and lung, whereas atrazine targets mammary glands and toxaphene limits its effects to the liver and thyroid gland. The use of EPA-recommended soil cleanup concentrations reduced the cancer risks due to the presence of arsenic and toxaphene to the 10^{-5} and 10^{-6} range, respectively. Soil remediation efforts based on calculated and EPA-recommended concentrations will produce potential cancer risks in the 10^{-4} to 10^{-6} range for all site-related carcinogens. A 10^{-4} to 10^{-6} risk level should be acceptable for an industrial site in which residential exposure is expected to be minimal (55 FR 30798; July 27, 1990).



U.S. Department of Justice

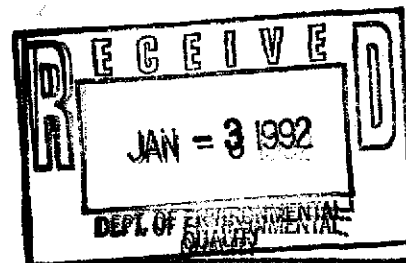
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90-7-1-463

Washington, D.C. 20530

January 2, 1992

VIA FEDERAL EXPRESS

William Stephen Spengler, Chief
RCRA Section
Department of Environmental Quality
Office of Pollution Control
2380 Highway 80 West
Jackson, Mississippi 39209



Re: Complaint against Cedar Chemical Corporation

Dear Mr. Spengler:

This is to notify you that the United States intends to file a complaint against Cedar Chemical Corporation under the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq., arising from releases of hazardous waste and hazardous waste constituents at the Cedar Chemical Corporation facility on Rifle Range Road, in Vicksburg, Mississippi. This notice is provided to you pursuant to Section 3008(a)(2) of RCRA, 42 U.S.C. § 6928(a)(2).

The complaint alleges that there have been releases of hazardous waste and hazardous waste constituents at the facility in connection with Cedar Chemical's operations at the site. Cedar Chemical operated a container storage area that was a facility for the treatment, storage or disposal of hazardous waste within the meaning of Section 3005(a) of RCRA, 42 U.S.C. § 6925(a). Cedar operated the facility under interim status until on or about August 10, 1983. At that time, Cedar submitted an amended Part A application, deleting the container storage area from the application, claiming that it no longer needed interim status or a final permit for the container storage area because the area was exempt from the permitting requirements under 40 C.F.R. § 262.34. However, as the complaint alleges, Cedar did not fulfill the 90-day storage exemption requirements of 40 C.F.R. § 262.34 so as to exempt the container storage area from the permitting requirements of RCRA. Thus, the company lost interim status and was required to close the container storage area. The complaint further alleges Cedar is required pursuant to Section 3008(h) of RCRA to perform corrective action at the

site. The complaint seeks an order requiring Cedar to close the container storage area and perform corrective action at the site.


The parties have negotiated a settlement of this matter, and a consent decree will be lodged with the court at the time the complaint is filed. Under the consent decree, Cedar is required to close the drum storage area. Cedar must also develop and implement a corrective action plan at the site in accordance with the scopes of work attached to an incorporated in the consent decree.

If you have any question regarding this matter, please feel free to call me at (202) 514-2778. You can also contact Zylpha Pryor-Bell, the Assistant Regional Counsel responsible for this case at EPA Region IV, at (404) 347-2641 (ext. 2283).

Sincerely,

Acting Assistant Attorney General
Environment and Natural Resources
Division

By:



Karen S. Dworkin
Attorney, Environmental
Enforcement Section

cc: Zylpha Pryor, Esquire

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

HAND DELIVERED

REPLY TO: P.O. BOX 3
VICKSBURG, MS 39181
(601) 636-1231

Mr. John Taylor
Environmental Engineer
Mississippi Department of Environmental Quality
2380 Highway 80 West
Jackson, MS 39204

December 31, 1991

Re: Cedar Chemical Corporation
Drum Storage Area Closure Plan

Dear Mr. Taylor:

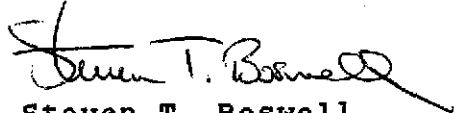
As we discussed by telephone today, attached is a copy of the recently submitted closure plan for the Cedar Chemical Hazardous Waste Drum Storage Area. This copy was requested by Ms. Elizabeth Ketcham of USEPA, Region IV, and you have indicated you will forward it to her.

Also as we have discussed, Cedar seeks to have approved closure performance standards at the 10^{-4} risk level due to the present (and probable future) industrial setting of the site. At this time, you have indicated that MSDEQ and Region IV will require 10^{-6} cumulative levels due to the proximity of residential areas. Cedar estimates the closest occupied dwelling to be 600 feet uphill and upwind. While this statement is certainly not a complete analysis of exposure pathways, Cedar desires to discuss further the possibility that 10^{-4} levels can be appropriate for the site.

Cedar also desires to discuss the appropriateness of cumulative risk as different constituents may have affect target organs and effects may not be cumulative.

Please contact me with any questions concerning this matter,

Sincerely,



Steven T. Boswell
Director of Env. Affairs

STB: pc

xc: Mr. Miles
Mr. Madsen
Mr. Karkkainen, Woodward-Clyde
Mr. Malone, Apperson, Crump, Duzane and Maxwell

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P.O. BOX 3
VICKSBURG, MS 39181
(601) 636-1231

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P 413 276 238

Mr. John Taylor
Environmental Engineer
Mississippi Department of Environmental Quality
2380 Highway 80 West
Jackson, MS 39204

December 9, 1991

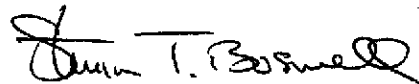
Re: Cedar Chemical Corporation, MSD990714081
Hazardous Waste Container Storage Area
Off-Specification Product Storage Area
Closure Plan

Dear Mr. Taylor:

Please find accompanying this letter the revised closure plan requested by your letter of November 7, 1991. It is Cedar's intent to use high pressure water cleaning on the surfaces of the two areas, followed by sampling to determine if residual levels of constituents are below the health-based criteria to meet the closure performance standard.

If there are any questions concerning this matter, please contact me.

Sincerely,



Steven T. Boswell
Director of Env. Affairs

STB: pc

xc: Mr. Miles
Mr. Madsen
Mr. Karkkainen, Woodward-Clyde



STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
RAY MABUS
GOVERNOR

November 7, 1991

CERTIFIED MAIL NO. P 868 026 160

Mr. Steven T. Boswell
Cedar Chemical Corporation
P. O. Box 3
Vicksburg, MS 39180

Re: Additional
Plan for th
Container s
Off-Specifi
Storage Are

P 868 026 160
Certified Mail Receipt
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

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TOTAL Postage & Fees	\$
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PS Form 3800, June 1990

Dear Mr. Boswell:

Please find enclosed a copy of comments generated by U.S.E.P.A. Region IV based on their review of the above-referenced closure plan. This is the same list that Mr. Trey Fleming mailed to you on August 19, 1991. These comments are in addition to those already made by this office and must be satisfactorily addressed prior to MDEQ approval of the closure plan.

Also, all closure standards have been recalculated and are now as follows:

	Soil	Hydroblast
1) Dinoseb	80 mg/kg	0.008 mg/l
2) Arsenic	80 mg/kg	0.050 mg/l
3) Toxaphene	0.6 mg/kg	3.2×10^{-5} mg/l
4) Atrazine	3.2 mg/kg	1.6×10^{-4} mg/l

Please submit a revised Closure Plan based on these comments within thirty (30) days of receipt of this letter. If you have any questions regarding this issue please contact Mr. John C. Taylor of this office at 961-5171.

Sincerely,

John C. Taylor

John C. Taylor
Hazardous Waste Division

JCT:lfc

Enclosure

cc: Mr. James Scarbrough, EPA

Mr. Steven T. Boswell
Cedar Chemical Corporation
P.O. Box 3
Vicksburg, Mississippi 39180

Draft letter
by TIF

Re: Additional Comments on the
Closure Plan for the Hazardous
Waste Container Storage Area and
the Off-Specification Product
Storage Area.

Dear Mr. Boswell,

Please find enclosed a copy of comments generated by U.S.E.P.A. Region IV based on their review of the above-referenced closure plan. This is the same list I ~~previously~~ mailed to you on August 19, 1991. These comments are in addition to those already made by this office and must be satisfactorily addressed prior to MDEQ approval of the closure plan.

Please submit a revised Closure Plan based on these comments within thirty (30) days or if you have any questions regarding this issue please contact Mr. ~~Tony Fleming~~ John C. Taylor of this office at 961-5171.

Sincerely

John C. Taylor ^{Hazardous Waste Division}
~~Tony Fleming, P.E., Coordinator~~
RCRA TSD Branch

Also, ~~regarding closure standards~~
all ~~closure standards~~ have been recalculated and are ^{now} as follows:

	Soil	hydroblast
1) Dioxin	700 mg/kg	0.035 mg/l
2) Arsenic	?	0.050 mg/l
3) Toxaphene	0.6 mg/kg	3.2×10^{-5} mg/l
4) Atrazine	3.2 mg/kg	1.6×10^{-4} mg/l

~~1.85 mg/kg~~
~~NE (0.001) (0.0001) = 700 mg/kg~~

COPY EPA



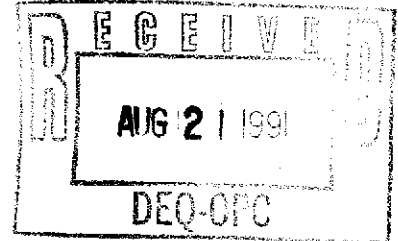
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

AUG 19 1991

4WD-RCRAFFB



Mr. Toby M. Cook, Coordinator
RCRA TSD Branch
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, Mississippi 39209

Re: EPA Comments on Closure Plan
Cedar Chemical Corporation
Vicksburg, Mississippi
EPA I.D. Number MSD 990 714 081

Dear Mr. Cook:

The Agency has reviewed the revised closure plan for the Hazardous Waste Drum Storage Area and Returned Product Storage Area at Cedar Chemical Corporation in Vicksburg, Mississippi, which was submitted to MDEQ on May 15, 1991.

Based on input from the Laboratory Evaluation and Quality Assurance Section of the Environmental Services Division, and review of the above document, the enclosed comments are offered for inclusion into a Notice of Deficiency for this document.

If you have any questions, please contact Elizabeth Ketcham of the Waste Engineering Section at (404)347-3433.

Sincerely yours,

James H. Scarbrough, P.E., Chief
RCRA and Federal Facilities Branch
Waste Management Division

Enclosure

COMMENTS ON CLOSURE PLAN FOR
CEDAR CHEMICAL CORPORATION
EPA ID NUMBER MSD 990 714 081

<u>LOCATION</u>	<u>COMMENT</u>
1. Page 2	Response to Comments Comment 2. Facility should have added a sample point rather than relocating from the side to the bottom of the sump.
2. Page 3	<u>1.4 Description of Wastes Stored</u> This section should include an estimate of the maximum inventory of hazardous wastes ever onsite over the active life of the facility in accordance with 40 CFR 265.112(b)(3).
3. Page 4	<u>2.0 CLOSURE PERFORMANCE STANDARD</u> The reference used in obtaining the performance standard for Atrazine should be documented in a manner similar to that used for the other constituents. According to the HEAST tables, Atrazine is a carcinogen in addition to being a systemic toxicant. The Carcinogenic Slope Factor is $2.2 \times 10^{-1} \text{ (mg/kg-day)}^{-1}$. A MSDS for Atrazine should also be included with the plan.
4.	In order to demonstrate that the storage areas are clean, the facility must show through direct sampling, that each concrete surface has been decontaminated to health-based levels for each hazardous constituent present in any hazardous waste ever managed in the unit. Analysis of the hydroblast water is not sufficient, due to the potential for dilution and volatilization of hazardous constituents in the waste.
5.	According to the MSDS for "Potato Top Killer 300", toluene is present in the material, in addition to Dinoseb. Therefore, toluene should be addressed in all of the sampling and analysis sections of the plan.
6. Page 6	<u>3.2 Pad and Equipment Decontamination</u> Since listed waste was stored on the storage pads, any residue or debris removed from the pad is considered to contain listed waste, and must be managed as hazardous waste, unless sampling shows that all hazardous constituents, for which the wastes are listed, are present below health-based levels. TC testing is not sufficient for material that contains listed hazardous waste.

COMMENTS ON CLOSURE PLAN FOR
CEDAR CHEMICAL CORPORATION
EPA ID NUMBER MSD 990 714 081
Page 2

<u>LOCATION</u>	<u>COMMENT</u>
7. Page 6 <i>Will discuss with ESD</i>	<u>3.3 Contaminated Soil Removal</u> This section should be expanded to address how Cedar will determine when enough contaminated soil has been removed from a given area. Some allowance should be made for such areas to be re-sampled to verify that remaining soil is not contaminated above health-based levels. Additional soil should be excavated and re-sampled until the areas are shown to be clean.
8. Pages 6-7	<u>3.4.1 Water Sampling</u> (Comment from ESD) Sampling procedures in this section, and in the following section on Soil Sampling, sample preservation procedures and holding times should be included.
9. Pages 7-8	<u>3.4.2 Soil Sampling</u> A rationale for determining proposed sample locations should be provided in the plan to show that the number and depths of samples will be sufficient to demonstrate clean closure.
10.	Decontamination procedures in the Athens SOP has been revised. There are separate procedures for initial decontamination prior to sampling and decontamination in the field. Copies of the relevant pages from the manual are enclosed with these comments.
11. Page 11	<u>3.5.4 Analytical Methods and Parameters</u> (Comments from ESD)
11.	There is a method in SW-846 for Dinoseb; it is 8150. The Cedar Chemical method in Exhibit A appears to be a semi-quantitative screen procedure; it is suggested that 8150 be used.
12. <i>EPA gives 0.29 mg/L</i>	Method 625 is not sensitive enough for toxaphene at the action level (.005 mg/L). Method 608 or 8080 is recommended.
13.	No reference is given for Atrazine. EPA Methods 505, 507 or 525 (drinking water methods) are suggested.
14. <i>Probably Analytical Technologies, Inc. Pensacola</i>	What laboratory, besides Cedar Chemical, will be used? Where will the split samples be analyzed -- ESD?

COMMENTS ON CLOSURE PLAN FOR
CEDAR CHEMICAL CORPORATION
EPA ID NUMBER MSD 990 714 081

Page 3

LOCATION

COMMENT

Page 12

15.

7.0 CONTINGENT CLOSURE PLAN

It is unclear as to why a contingent closure plan was provided for a storage area, since it is not required under §§ 264.110(b) or 265.110(b). Normally, the unit would be redesignated as a land unit and subject to all post-closure requirements listed under 265, as well as post-closure permitting. Cedar should be required to prepare and submit a post-closure plan after a determination has been made that the unit cannot be certified clean closed. The contingent closure plan provided is not acceptable, and Cedar should not be led to believe that this plan alone will suffice in the event that the units cannot be clean-closed.

B.8 FIELD EQUIPMENT CLEANING PROCEDURES

B.8.1 General

Sufficient clean equipment should be transported to the field so that an entire study can be conducted without the need for field cleaning. However, this is not possible for some specialized items of field equipment such as portable power augers (Little Beaver®), well drilling rigs, soil coring rigs, and other large pieces of field equipment. In addition, particularly during large scale studies, it is not practical or possible to transport to the field all of the precleaned field equipment required. The following procedures are to be utilized when equipment must be cleaned in the field.

B.8.2 Equipment Used for Routine Sample Collection Activities

For routine operations involving classic parameter analyses, water quality sampling equipment such as Kemmerers, buckets, DO dunkers, dredges, etc., may be cleaned with sample or deionized water between sampling locations. A brush may be used to remove deposits of material or sediment, if necessary. If deionized water is used, water samplers should be flushed with the sample at the next sampling location before the sample is collected. It should be emphasized that these procedures cannot be used to clean equipment for the collection of samples for organic compounds or trace metals analyses.

Flow measuring equipment such as weirs, staff gages, velocity meters, and other stream gaging equipment may be cleaned with tap water after use between measuring locations, if necessary.

B.8.3 Teflon®, Glass, Stainless Steel or Metal Equipment Used to Collect Samples for Organic Compounds and Trace Metals Analyses*

1. Clean with tap water and laboratory detergent using a brush if necessary to remove particulate matter and surface films.
2. Rinse thoroughly with tap water.
3. Rinse thoroughly with deionized water.
4. Rinse twice with solvent.
5. Rinse thoroughly with organic-free water and allow to air dry as long as possible.
6. If organic-free water is not available, allow equipment to air dry as long as possible. Do not rinse with deionized or distilled water.

* - Portable power augers (such as the Little Beaver®) or large soil boring/drill rigs should be cleaned before boring or drilling operations. (See Appendices B.7.3 and B.7.4)

Section No. B.8

Revision No. 0

Date: 2/1/91

Page 2 of 2

7. Wrap with aluminum foil, if appropriate, to prevent contamination if equipment is going to be stored or transported.

B.4 CLEANING PROCEDURES FOR STAINLESS STEEL OR METAL SAMPLING EQUIPMENT USED FOR THE COLLECTION OF SAMPLES FOR TRACE ORGANIC COMPOUNDS AND/OR METALS ANALYSES*

1. Wash equipment thoroughly with laboratory detergent and hot water using a brush to remove any particulate matter or surface film.
2. Rinse equipment thoroughly with hot tap water.
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4. Rinse equipment twice with solvent and allow to air dry for at least 24 hours.
5. Wrap equipment in one layer of aluminum foil. Roll edges of foil into a "tab" to allow for easy removal. Seal the foil wrapped equipment in plastic and date.
6. Rinse the stainless steel or metal sampling equipment thoroughly with tap water in the field as soon as possible after use.

* - When this sampling equipment is used to collect samples that contain oil, grease, or other hard to remove materials, it may be necessary to rinse the equipment several times with pesticide-grade acetone or hexane to remove the materials before proceeding with Step 1. In extreme cases, when equipment is painted, badly rusted, or coated with materials that are difficult to remove, it may be necessary to steam clean, wire brush, or sandblast equipment before proceeding with Step 1. Any metal sampling equipment that cannot be cleaned using these procedures should be discarded.



FILE COPY

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
RAY MABUS
GOVERNOR

August 19, 1991

Mr. Steve Boswell
Cedar Chemical Corporation
P. O. Box 3
Vicksburg, Mississippi 39180

Re: Closure Plan for Hazardous Waste
Container Storage Area and Off-Specification
Product Storage Area Dated April 29, 1991

Dear Mr. Boswell:

Enclosed please find a copy of comments issues by U.S. EPA, Region IV on the above-referenced closure plan. I will be in contact with you in a few days to discuss these comments.

If you have any questions, please contact me at 961-5171.

Sincerely,

A handwritten signature in cursive script that reads "Trey Fleming".

Trey Fleming
Hazardous Waste Division

TF-mes1
Enclosure

cc: Caleb Dana, Woodward-Clyde

WASTE MANAGEMENT DIVISION
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION IV
345 COURTLAND STREET, N.E.
ATLANTA, GA 30365

FACSIMILE TRANSMISSION SHEET
(Please Number All Pages)

DATE: 8/15/91 NO. OF PAGES (Inc. Cover Sheet) 8

TO: TREY FLEMING TO FAX NUMBER: (601) 354-661

ADDRESS: MDEQ TO PHONE NUMBER: (601) 961-5066

RA TA TED BRANCH FROM FTS FAX NUMBER: 257-5205

COMMERCIAL FAX NO: 404-347-5205

IF THE MESSAGE IS RECEIVED POORLY, PLEASE CALL LISSE BUCHAN
IN OR AT FTS 257-3432 OR COMMERCIAL (404) 347-3433

SPECIAL NOTES OR INSTRUCTIONS

PLS CALL IF YOU HAVE ANY
QUESTIONS

THE FAX, MAN,
AND NOTHING BUT
THE FAX.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COUNTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

Mr. Toby M. Cook, Coordinator
RCRA TSD Branch
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, Mississippi 39209

Re: EPA Comments on Closure Plan
Cedar Chemical Corporation
Vicksburg, Mississippi
EPA I.D. Number MSD 990 714 081

Dear Mr. Cook:

The Agency has reviewed the revised closure plan for the Hazardous Waste Drum Storage Area and Returned Product Storage Area at Cedar Chemical Corporation in Vicksburg, Mississippi, which was submitted to MDEQ on May 15, 1991.

Based on input from the Laboratory Evaluation and Quality Assurance Section of the Environmental Services Division, and review of the above document, the enclosed comments are offered for inclusion into a Notice of Deficiency for this document.

If you have any questions, please contact Elizabeth Ketcham of the Waste Engineering Section at (404)347-3433.

Sincerely yours,

James H. Scarbrough, P.E., Chief
RCRA and Federal Facilities Branch
Waste Management Division

Enclosure

COMMENTS ON CLOSURE PLAN FOR
CEDAR CHEMICAL CORPORATION
EPA ID NUMBER MSD 990 714 081

LOCATION

COMMENT

1. Page 2
Response to Comments Comment 2.
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COMMENTS ON CLOSURE PLAN FOR
CEDAR CHEMICAL CORPORATION
EPA ID NUMBER MSD 990 714 081

Page 2

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COMMENTS ON CLOSURE PLAN FOR
CEDAR CHEMICAL CORPORATION
EPA ID NUMBER MSD 990 714 081

Page 3

LOCATION

COMMENT

Page 12

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Section No. B.8
Revision No. 0
Date: 2/1/91
Page 1 of 2

B.8 FIELD EQUIPMENT CLEANING PROCEDURES

B.8.1 General

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4. Rinse twice with solvent.
5. Rinse thoroughly with organic-free water and allow to air dry as long as possible.
6. If organic-free water is not available, allow equipment to air dry as long as possible. Do not rinse with deionized or distilled water.

* - Portable power augers (such as the Little Beaver®) or large soil boring/drill rigs should be cleaned before boring or drilling operations. (See Appendices B.7.3 and B.7.4)

Section No. B.8
Revision No. 0
Date: 2/1/91
Page 2 of 2

7. Wrap with aluminum foil, if appropriate, to prevent contamination if equipment is going to be stored or transported.

Section No. B.4
Revision No. 0
Date: 2/1/91
Page 1 of 1

B.4 CLEANING PROCEDURES FOR STAINLESS STEEL OR METAL SAMPLING EQUIPMENT USED FOR THE COLLECTION OF SAMPLES FOR TRACE ORGANIC COMPOUNDS AND/OR METALS ANALYSES*

1. Wash equipment thoroughly with laboratory detergent and hot water using a brush to remove any particulate material.
2. Rinse equipment thoroughly with hot tap water.

Rinse equipment thoroughly with deionized water.

Rinse equipment twice with solvent and allow to air dry for at least 24 hours.

Wrap equipment in one layer of aluminum foil. Roll edge of foil into a "tab" to allow for easy removal. Seal the foil wrapped equipment in plastic and date.

Rinse the stainless steel or metal sampling equipment thoroughly with tap water in the field as soon as possible after use.

* When this sampling equipment is used to collect samples that contain oil, grease, or other hard to remove materials, it may be necessary to rinse the equipment several times with pesticide-grade acetone or hexane to remove the materials before proceeding with Step 1. In extreme cases, when equipment is painted, badly rusted, or coated with materials that are difficult to remove, it may be necessary to steam clean, wire brush, or sandblast equipment before proceeding with Step 1. Any metal sampling equipment that cannot be cleaned using these procedures should be discarded.



FILE COPY

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
RAY MABUS
GOVERNOR

May 16, 1991

Mr. James Scarbrough, P.E., Chief
RCRA Branch - USEPA
Region IV
345 Courtland Street, N.E.
Atlanta, GA 30365

Re: Cedar Chemical Corporation
Vicksburg, Mississippi
MSD990714081

Dear Mr. Scarbrough:

Enclosed please find a copy of the revised closure plan for the Hazardous Waste Drum Storage Area and Returned Product Storage Area at Cedar Chemical Corporation in Vicksburg, Mississippi. This closure plan was initially submitted to the Mississippi Department of Environmental Quality (MDEQ) on January 15, 1991. This revised closure plan was submitted to MDEQ on May 15, 1991, based on comments made by MDEQ on March 28, 1991, in a letter to Cedar.

If you have any comments regarding this revised closure plan, please submit them to MDEQ by June 17, 1991.

Sincerely,

A handwritten signature in cursive script that reads "Toby M. Cook".

Toby M. Cook, Coordinator
RCRA TSD Branch

TMC:TF:lfc

Enclosure

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P.O. BOX 3
VICKSBURG, MS 39181
(601) 636-1231

HAND DELIVERED

Mr. Trey Fleming
Environmental Engineer
Mississippi Department of Environmental Quality
Bureau of Pollution Control
2380 Highway 80 West
Jackson, MS 39204

May 15, 1991

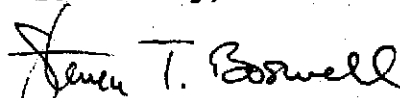
Re: Cedar Chemical Corporation, MSD990714081
Proposed Closure Plan for
Hazardous Waste Container Storage Area

Dear Mr. Fleming:

Attached is a revised version of the proposed Closure Plan for Cedar's Hazardous Waste Drum Storage Area and Returned Product Storage Area. The plan has been revised to include the requests for changes made by MSDEQ after the initial review.

If there are any questions concerning this matter, please contact me.

Sincerely,



Steven T. Boswell
Director of Env. Affairs

STB: pc

xc: Mr. Ahlers
Mr. Madsen
Mr. Malone
Mr. Karkkainen



STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
RAY MABUS
GOVERNOR

March 28, 1991

Mr. Steve Boswell
Director, Environmental Affairs
Cedar Chemical Corporation
Vicksburg Chemical Division
P.O. Box 3
Rifle Range Road
Vicksburg, Mississippi 39180

Re: Comments on Closure Plan
Submitted 1/15/91

Dear Mr. Boswell,

The Mississippi Department of Environmental Quality has reviewed the Closure Plan for the Returned Product Storage Area and the Hazardous Waste Drum Storage Area at Cedar submitted January 15, 1991, and has the following comments on that plan:

1. The proposed performance standards for the given target constituents, dinoseb (0.04 mg/l), arsenic (0.05 mg/l) and toxaphene (0.005 mg/l), in the hydroblast water are adequate. Also, the proposed performance standards for dinoseb (80.0 mg/kg), arsenic (80.0 mg/kg) and toxaphene (0.6 mg/kg) in soils are adequate.

In the draft RCRA Facility Assessment (RFA) Report conducted by A.T. Kearney for U.S.E.P.A., it was noted that some portions of the drum storage area were covered in what appeared to be atrazine. Therefore, the Department recommends that closure standards for atrazine be added. The standard for atrazine in the hydroblast water is 0.175 mg/l and for soils the standard is 400 mg/kg.

These atrazine levels are determined based on a reference dose (RfD) of 0.005 mg/kg-d.

The appropriate analytical method for atrazine should be selected by Cedar Chemical.

2. At least one soil sample should be collected from beneath each of the sumps for target constituent analysis.
3. The plan must describe a sampling protocol whereby soils collected from sampling points where cutting torches have been used are not affected by the use of said torches.
4. The plan calls for analysis of two concrete samples from the hazardous waste container storage area to be analyzed for the four target constituents. Additionally, two concrete samples should be collected from the off-spec product storage area and analyzed.
5. The plan calls for "plastic sheeting and other solids generated during the decontamination operations" to be wipe tested and disposed of properly, or else triple rinsed. No criteria is given as to how a decision will be made to handle such solid waste. This criteria should be clearly stated in the closure plan.

Also, no mention is made as to how solids, such as chunks of concrete dislodged by hydroblasting, be handled. This issue should be addressed in the closure plan.

6. Cedar Chemical should submit a proposed schedule of activities in its revised closure plan more detailed than that in Section 6 of the January 1991 Closure Plan.
7. Typically, organic materials such as butyrate or visqueen are not used in the collection of environmental samples for organics analyses. However, since the target constituents in this closure effort are limited to four specific compounds, organic-based materials shouldn't interfere with the required analyses.

However, Cedar may wish to consider replacing these organic materials in the plan with inorganic materials.

8. Holes in the concrete slab should be labeled in some fashion after filling so that they may be easily identified in case some subsoil samples show contamination.

9. The recommended decontamination procedure of the U.S. Environmental Protection Agency's Athens, Georgia, Laboratory is as follows:

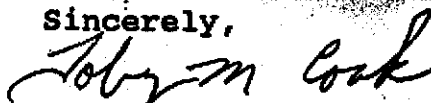
- a) wash in detergent (Alconox) solution;
- b) rinse with distilled, deionized water; and,
- c) rinse with pesticide-grade isopropanol
- d) after rinsing with isopropanol, the equipment should be allowed to air dry.

The Athens, Georgia, Laboratory of the U.S.E.P.A. has said that Threshold Limit Value (TLV) for methanol may be approached or exceeded when used in such activity.

10. At least four sample splits should be sent to an offsite laboratory for dinoseb and arsenic analyses in order to verify the accuracy of Cedar's onsite lab.
11. In the copy of the final report of closure activities to be submitted to the Mississippi Office of Pollution Control (MOPC), actual photographs, rather than photocopies of photographs, should be submitted.
12. MOPC should be notified two (2) full working days prior to sampling activities such that a representative of MOPC may observe sampling or collect splits, as desired.

The Closure Plan should be revised to address these comments and resubmitted for additional review. If you have any questions regarding these comments, please contact Mr. Trey Fleming of my staff at 961-5066.

Sincerely,



Toby M. Cook, P.E., Coordinator
RCRA TSD Branch

cc: James A. Scarbrough, USEPA Region IV
Caleb Dana, Woodward Clyde

A: CEDARCH1/TF

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P.O. BOX 3
VICKSBURG, MS 39181
(601) 636-1231

HAND DELIVERED

Mr. Toby Cook
Environmental Engineer
Mississippi Department of Environmental Quality
Bureau of Pollution Control
2380 Highway 80 West
Jackson, MS 39204

January 15, 1991

Re: Cedar Chemical Corporation
Hazardous Waste Drum Storage and
Returned Product Storage Area
Proposed Closure Plan

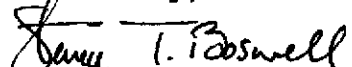
Dear Mr. Cook:

Please find attached the proposed Closure Plan for Cedar Chemical's Hazardous Waste Drum Storage Area and returned Product Storage Area at the Vicksburg facility. Cedar proposes to close the areas by hydroblasting the contaminated surfaces. Liquid wastes generated will be treated in Cedar's activated carbon units. Solid wastes which are hazardous will be taken off-site for treatment or disposal.

Sub-surface conditions will be investigated to detect if migration has occurred. A contingent plan will be implemented if clean closure cannot be achieved. Cedar intends to begin to implement the plan as soon as it is approved.

If there are any questions concerning this matter, please contact me.

Sincerely,


Steven T. Boswell
Director of Env. Affairs

STB: pc

xc: Mr. Ahlers
Mr. Madsen
Mr. Malone



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171



MEMORANDUM

TO: Vicksburg Chemical (VCC) File
FROM: Jack McCord
THROUGH: Steve Spengler
SUBJECT: Status of Work Being Done at Vicksburg Chemical
DATE: July 15, 1988

Today, I spoke to Steve Boswell concerning the work being done at Vicksburg Chemical. During our telephone conversation Steve made me aware of the following items:

1. He had not yet received our letter granting a 30 day extension for their drums of mixed dinoseb and sulfuric acid wastes. However, they were expecting Cecos to approve the waste stream next week and be able to dispose of the waste shortly. They have received non-reacting drum liners and expect to receive 70 new drums on Monday. If Cecos does not approve the waste stream VCC will be able to repackage the waste for shipment anyway.
2. The wells and piezometers VCC proposed to remove in the letter dated June 21, 1988, have been removed and plugged. A new well has been added also as proposed in the letter. VCC will be submitting a plan for adding this well to their sampling and analysis plan.
3. VCC has recently changed primary contractors for finalizing their closure plan. The new contractor is IT Corporation. Although they are still about 1 month behind they are now making substantial progress.
4. They will be shipping the drums out of their returned product storage area to Chem Waste Management within the next couple of weeks. They will then rent a cement grinder and try and make some more progress on cleaning the floors both there and in the hazardous waste storage area. They ultimately would like to establish a new less than 90 day drum storage area in a more secure place.

JM:els
cc: Mr. James Scarbrough, EPA